

## EXPLANATION OF PLATE XVII.

- Fig. 1. *Platypeza submacula*, abdomen and part of wing.  
Fig. 2. *Platypeza minorata*, hind tarsus.  
Fig. 3. *Platypeza elongata*, abdomen.  
Fig. 4. *Platypeza velutina*, parts of wing.  
Fig. 5. *Platypeza submacula*, hind tarsus.  
Fig. 6. *Platypeza nitida*, part of wing.  
Fig. 7. *Platypeza elongata*, hind tarsus.  
Fig. 8. *Platypeza taniata*, abdomen, male and female variety.  
Fig. 9. *Platypeza nitida*, hind tarsus.  
Fig. 10. *Platypeza taniata*, part of wing.  
Fig. 11. *Platypeza elongata*, part of wing.
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NEW WESTERN AND SOUTHWESTERN  
MUSCOIDEA

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The following are descriptions of some new muscoid genera and their genotypes from the western United States and the southwest of North America, including the northwest of Mexico. The region which they inhabit extends from Idaho and Yellowstone Park to Texas, California and western Chihuahua.

## Family CALIRRHOIDÆ

**COCKERELLIANA** new genus.

Genotype, *Cockerelliana capitata* Townsend new species.

Female.—Form rather narrowed. Lower profile of head nearly three fifths of frontal profile, the occiput being lightly bulged. Facial profile retreating, the vibrissal axis distinctly less than antennal. Clypeus rather shortened, broadening but little below, carina vestigial. Epistoma elongate, narrowed distinctly by vibrissal angles. Facialia bare, flattened, rather narrow, not prominent. Vibrissæ set well above oral margin. Peristomalium long, curved in profile, with a few widely separated bristles on lower extent. Proboscis short,

fleshy, less than head-height, part below geniculation hardly as long as antennæ. Palpi well developed, hardly as long as third antennal joint, faintly thickened at tip. Antennæ inserted but little below upper eye limits, reaching well short of vibrissæ; second joint distinctly elongate, rather longer than the distance between vibrissæ and oral margin; third joint hardly twice as long as second, equilateral, about same width as tip of second, evenly rounded at tip. Arista porrect, strong, thickened, tapered to sharp point, basal joints very short. Eyes practically bare, hardly twice as long as greatest width, descending about even with tips of antennæ. Front at vertex taking up fully half of head-width, slightly widening anteriorly. Parafrontals broad anteriorly, narrowing rapidly posteriorly, with a very few scattered minute bristly hairs. Frontals descending about to tip of second antennal joint, two placed below base of antennæ, three decussate pairs above base. Verticals both well developed. Three proclinate fronto-orbitals, of which the middle one is weak and the other two strong; three strong reclinate ones in line with frontals, and one or two very weak bristles in line with and immediately behind the proclinate. Frontalia anteriorly as wide as antennal base, widening posteriorly to about twice the anterior width but not occupying quite one half the vertical width of front. Ocellars present, strong, divaricate. Parafacials above broader than clypeus, distinctly narrowed below, broadening again slightly at cheek grooves, their planes converging anteriorly at an angle of about 45 degrees; two or three downwardly-directed macrochætæ near front edge, about level with middle of third antennal joint. Cheeks a little less than one half eye-height, rather longer than broad. Cheek-grooves very faintly marked, hardly impressed but extensive, ascending broadly behind lower half of eye. No geno-orbitals. Sternopleurals, 0:2:1; postsuturals, 3; preacrostichals, 3, rather weak; postacrostichals, 3, but front one or two weak. Three strong lateral scutellars; weak closely-approximated apical pair slightly removed from edge; about four weak discals in irregular row. Wings about as long as abdomen, nearly two and one half times as long as broad. Costal spine short and stout, distinctly longer than costal bristles. Third vein bristled about to small crossvein, its course very straight beyond same. Apical cell rather narrowed, open, terminating nearly as far before wing-tip as length of apical crossvein. Fourth vein represented by wrinkle

beyond origin of apical crossvein. Cubitus quite as near to front as to hind margin of wing; the apical crossvein at origin set at hardly more than a right angle, rather evenly and gently bowed in. Hind crossvein regularly sinuate, its axis almost parallel with that of the apical, distinctly nearer to latter than to small crossvein. Tegulæ large, naked, the small scale not much over one fifth the size of the other. Legs not elongate. Hind tibiæ subpectinate, with longer bristle. Metatarsi of usual length, front tarsi unmodified. Claws shorter than last tarsal joint. Abdomen elongate-subconical, not wider than thorax; no median macrochætæ on first segment, but one lateral discal and one lateral marginal; second with median marginal pair and lateral marginal pair; third with marginal row of ten or twelve including ventral; fourth with marginal row of ten.

Named in honor of Dr. T. D. A. Cockerell.

**Cockerelliana capitata** new species.

Length of body, 9.5 mm.; of wing, 6 mm. One female, Albuquerque, New Mexico, June 30 (Cockerell).

Brown or blackish in ground color, the venter and especially cheeks and face less deeply colored. Head with silvery bloom over all except anterior part of frontalia and subrectangular blotch marking junction of parafacials and parafrontals. Ground color of cheeks, face and frontalia fulvous-brown. First two antennal joints and palpi reddish-fulvous. Thorax, scutellum and abdomen silvery; thorax with two narrow median and two heavier outer vittæ; pollen of abdomen concentrated on anterior three fifths of second and third and anterior half of fourth segments, leaving all of first and broad hind margins of second to fourth subshining blackish. Legs black. Wings clear to whitish, veins yellowish to brownish-yellow at base. Tegulæ nearly white.

Holotype, No. 19560 U. S. N. M.

**PARAMUSCPTERYX** new genus.

Genotype, *Paramuscopteryx genalis* Townsend new species.

Differs from *Muscopteryx* as follows: Female.—Vertex one third head width, front broadening rapidly. Parafacials with irregular double row of bristles, extending fully to lower end of eyes. Two proclinate fronto-orbitals. One pair of divaricate inner fronto-orbitals. Vibrissæ level with oral margin, from four to six closely-placed bristles above them. Cheeks nearly or quite three fourths of eye-height. Antennæ fully three fourths length of face, third joint fully one and one half times as long as second; arista thickened on

basal half, tapering. Palpi large, stout, thickened at tip. Scutellum with a weak divaricate apical pair of bristles, and three laterals, also some weak but long subapicals and discals. Abdomen wider than thorax, broad-ovate, discal macrochaetae on all the segments even including the first. Wings broad. Cubitus with short stump, apical crossvein nearly or quite straight. Claws rather short.

Male.—Vertex about one seventh of head width, front same width a little less than half way to base of antennae before broadening rapidly. Parafrontals and parafacials a little more thickly set with hairs. No fronto-orbitals either inner or outer, verticals hairlike and vestigial. Cheeks fully one half eye height. Third antennal joint proportionally longer, narrower, but hardly twice second; arista thickened on basal third. Palpi not so stout, but long and slightly thickened apically. Abdomen slightly narrower than thorax, elongate-subconical, discals and anteromarginals present. Wings narrow. Cubitus without stump, apical crossvein more bowed in. Claws very elongate, the front ones much longer than last tarsal joint.

**Paramuscopteryx genalis** new species.

Length of body, 8 mm.; of wing, 6 mm. One male and one female, Moscow, Idaho (Aldrich).

Shining black, head and thorax thinly silvery, frontalia and first two antennal joints black in female and brown in male, palpi blackish-rufous in male and obscure dark rufous in female. Abdomen of female showing pollen only on narrow bases of last three segments, that of male with pollen more general but rather heavier on bases of segments. Male abdomen is more brownish, especially venter. Legs black or brownish. Wings clear. Tegulae yellowish-white. (The male may not belong here.)

Holotype, No. 19614 U. S. N. M. Female. Allotype, male. The holotype bears label "*Muscopteryx chatosula* Towns." placed there by Coquillett, but this is not the species referred to under that name in Rev. Tach. 125. (Vide *Metopomuscopteryx tibialis*.)

**METOPOMUSCOPTERYX** new genus.

Genotype, *Muscopteryx tibialis* Coquillett, 1902, Proc. U. S. Nat. Mus., XXV, 115. It is to be noted here that the specimen cited by Coquillett under *Muscopteryx chatosula* in Rev. Tach., 125 (length 9 mm., Missouri), is a male of *tibialis* with the single label "Collection C. V. Riley."

Differs from *Paramuscopteryx* as follows: Macrochaetae much

longer, those of female strong but slender, those of male head hairlike except vibrissæ. Eyes thickly hairy in both sexes. Front strongly produced, the head profile very suggestive of that of *Eutrixa* but the front more produced; male vertex about one sixth of head width, or a little less; female vertex less than one third head width; frontalia much broader. Third antennal joint hardly longer than second in both sexes, second joint thickly set with short sharp spines; arista thickened on basal third. Cheeks over one half eye height in both sexes. Vibrissæ double, set well above oral margin. Palpi very slender, subfiliform. Only two lateral scutellars, apical pair decussate and long but weak. Abdominal macrochætæ rather thickly placed over whole tergum, erect and very long, curved, only a lateral bare space on each side of front portion which is smaller in male than in female. Venter with fine hairs. Legs very spinose, male femora more hairy, male claws very long. Wings narrow in both sexes, costal spine small, veins heavy; apical cell narrowly open or almost closed, ending well before wing tip; apical crossvein deeply bowed in; usually strong stump at cubitus which is sharply angled. Abdomen about same width as thorax in both sexes.

#### Family MELANOPHORIDÆ.

##### **HESPEROPHASIA** new genus.

Genotype, *Hesperophasia sciosa* Townsend new species.

Differs from *Hesperomyia* BB. as follows: Peristomal and frontal bristles about equal, delicate; a row of three or four proclinate fronto-orbital bristles in male continued on parafacials to lower border of eyes, all noticeably stronger than the frontals. Plane of parafacials almost same as that of facial plate. Second antennal joint fully as long as third, or slightly longer; arista very delicate, distinctly swollen on extreme base. Front of male narrowed on more than posterior half to little over one-eighth head width. Antennæ of male nearly reaching oral margin. Front in profile scarcely bulged, the face conspicuously receding. Cheek-grooves extending narrowly upward behind eyes. Hind cross vein straight, about in middle between small crossvein and bend of fourth; only the final course of apical crossvein nearly or quite parallel with same; crossveins far from parallel with inner wing-margin; fourth vein without stump at bend, third bristly half

way or more to small crossvein. Scutellum with three pairs of marginal macrochaetae, the apical pair decussate and moderately long; the middle pair extraordinarily long, curved and reaching to or beyond base of third segment though suberect; two long straight erect weak discal pairs, about as long as the front marginal and shorter than the apical. Wings and abdomen both narrow. Male abdomen with a median marginal pair of erect macrochaetae on each of the four segments, a lateral marginal on segments one to three, two or three lateral marginal on anal segment. Hairs of abdomen rather short, appressed. Hind tibiae not ciliate, male claws about as long as last tarsal joint; front metatarsi thickened, also front tibiae distally. Spine at base of hind metatarsi, front ones with several vestigial spines. Vibrissal angles not convergent, on oral margin, latter cut off.

***Hesperophasia setosa* new species.**

Length of body, scant 5 mm.; of wing, 3.5 mm. One male, Rio Ruidoso, White Mts., New Mexico, 6500 ft., on flowers of *Geranium atropurpureum*, August, 1898 (Townsend).

Black, the front and face lightly silvery, the parafacials and parafrontals with a row of shining black dots marking the origin of bristles, similar dots less well defined also marking the origin of the anterior frontal bristles. Antennae soft blackish, with faint grayish bloom; palpi blackish. Mesoscutum, scutellum and abdomen polished, with purplish luster, showing practically no pollen or only the faintest trace on thorax in very oblique lights. Legs black, femora brown, tibiae faintly tinged with brown. Wings clear except the smoky costal and subcostal cells; tegulae pale with fuscous borders.

Holotype, No. 19561 U. S. N. M.

**HESPEROPHASIOPSIS new genus.**

Genotype, *Hesperophasiopsis californica* Townsend new species.

Differs from *Hesperophasia* Townsend as follows: Sparse row of weak bristly hairs on parafacials in front of orbital row. Second antennal joint not so elongate, the third slightly longer than second. Front of male narrowed in middle to about or nearly one fifth head width, the borders arcuate, the front widening evenly to vertex as well as to lunula. Parafacials broader and not in plane of facial plate, normal. Cheeks quite one half eye height, or slightly more. Antennae of male reaching little more than three fourths way to oral margin. Hind crossvein practically parallel with apical, a little nearer



to bend of fourth; crossveins not parallel with inner wing margin, third vein bristly to small crossvein. Wings broader, bend of fourth vein almost as close to front margin as to inner margin of wing. Scutellar bristles weaker and shorter. Abdomen broader, no median marginal macrochaetae on first two segments in male, two median marginal and three lateral marginal on third segment; anal segment with discal row, and with weak marginal bristles. Hind metatarsi with spine at base on inner surface, the front ones hardly thickened and with several spines at base. Cheek grooves broadly extended obliquely upward under whole length of eyes to middle of occipital profile, very conspicuous.

**Hesperophasiopsis californica** new species.

Length of body, 5 mm.; of wing, 3.75 mm. One male, San Diego County, California, March 8, 1897 (labeled by Coquillett "*Hesperomyia erythroceræ* B. & B.").

Color description of *Hesperophasia setosa* T. applies to this species with following changes: Antennae and palpi wholly rufous, cheek-grooves conspicuously silver-burnished with oblique band. Wings very faintly smoky throughout, the costal portion a little more deeply so. Tegulae more nearly whitish throughout. Legs brownish, tarsi darker. Thorax and abdomen with dull green luster, as well as dark parts of head.

Holotype, No. 19562 U. S. N. M.

Family SALMACIIDÆ.

**GONIOCNEPHALIA** new genus.

Genotype, *Goniocnephalia melanica* Townsend new species.

Intermediate between *Knabia* and *Cnephalia*. Belongs in the Spalanzaniini. Differs from *Knabia* as follows: Male only described. Lower border of head longer, the facial profile not receding. Head bristles considerably stronger. Second arisal joint only moderately elongate. Proboscis below geniculation as long as lower border of head. Parafacials sparsely set with short irregularly placed bristles, without hair; no hair on cheeks, very little hair on parafrontals and that only posteriorly; no marginal row of bristles on parafacials. Body hair not quite so well developed. Cubitus distinctly nearer to hind margin of wing. Legs stouter, claws very elongate.

**Goniocnephalia melanica** new species.

Length of body, 12 mm.; of wing, 8.5 mm. One male, Las Vegas Mts., New Mexico, 11,000 ft., June, 1901 (Cockerell).

Differs from color description of *Knabia hirsuta* only as follows: Third antennal joint quite as black as arista. Outer pair of thoracic vittæ a little widened. Scutellum all testaceous except extreme narrow basal margin. Pollen bands of abdominal segments two to four broader, less well defined, more ashy in color. Wings wholly clear. Tegulæ watery-white.

Holotype, No. 19563 U. S. N. M.

**PARAPHASMOPHAGA** new genus.

Genotype, *Paraphasmophaga clavis* Townsend new species.

Would run to *Phasmophaga* Townsend in table (Ann. Ent. Soc. Amer., II., 245) but for long-petiolate apical cell, long stump at origin of apical crossvein, short and thick nail-like arista, no orbitals in male but front wide, facialia ciliate far up. Approaches *Paradmontia* Coquillett in the petiolate apical cell but petiole terminates far before wingtip, third vein bristly to small crossvein, arista short and thickened but second joint not elongate, parafacials bare but bristles on facialia.

Profile of parafacials and facialia strongly bulged, the lower border of head very short and rather rounded. Proboscis very short, palpi small and slender. Facial depression of male deeply excavated, the third antennal joint greatly elongated and extending to the cut-off oral margin, the second antennal joint excessively shortened. Vibrissæ on oral margin not longer than the peristomal bristles next to them. Eyes only very faintly hairy, front of male rather less than one half head width, parafacials about one half eye width, cheeks nearly one third eye height. Ocellar bristles present, widely divaricate. Origin of apical crossvein almost half way between front and hind margins of wing. Hind crossvein short and nearly straight, slightly nearer to small crossvein. First segment of abdomen with a small median marginal pair of macrochætæ, the following segments with median discal and marginal pairs, the anal segment with discal and marginal rows. Legs short, the claws of male short. Parafrontals with extra bristles and bristly hairs outside frontal rows. Frontalia broader than parafrontals, nearly as broad as distance between lunula and ocellar area. Arista porrect. Cilia of facialia directed downward. Ptilinal suture extending below eyes, about to vibrissal angles.

**Paraphasmophaga clavis** new species.

Length of body, 5.5 mm.; of wing, 3.75 mm. One male, October 9, mesa east of Las Cruces, New Mexico, 4000 ft. (Townsend).



Shining black, frontalia yellowish rufous, extreme base of antennæ rufous, face and front distinctly silvery. Mesoscutum thinly silvery before suture, vittæ faint. Wings clear, tegulæ white. Legs wholly soft black. Third antennal joint black with a faint grayish bloom, arista soft black. Ptilinal suture rufous.

Holotype, No. 19564 U. S. N. M.

### Family CROCUTIDÆ.

#### PHASIOSTOMA new genus.

Genotype, *Phasiostoma aristalis* Townsend new species.

Differs from *Epigrimyia* as follows: Male.—Vertex about three sevenths of head width, front slightly widening from same; face above middle slightly constricted from anterior frontal width, widening slightly below. Outer verticals short, ocellars weaker; two reclinate fronto-orbitals; two moderately strong proclinate fronto-orbitals, often a third weaker one in front of these with microchaetæ forming a continuation anteriorly in line with same as far as end of frontals, latter reaching end of second antennal joint. Frontalia averaging about as wide as one parafrontal, sometimes wider. Facialia quite strongly diverging downwardly, their surface pressed flat and even with that of the very narrowed parafacials, furnished with short microchaetæ nearly or more than half way up. Epistoma much projected anteriorly between the vibrissæ, the oral margin arcuate, the profile of epistoma projected from that of clypeus in a rather even curve, the mouth very suggestive of the Phasiid type but epistoma more prominent. Proboscis rather stout, the part below geniculation little more than two thirds head height. Palpi shorter. Eyes not reaching vibrissæ, the cheeks about two fifths of eye height. Antennæ reaching oral margin; third joint straight on upper edge, slightly widened distally, evenly curved on under edge and tip in profile; arista as long as third antennal joint, geniculate, thickened to tip, first joint rather longer than broad, second nearly or quite as long as third. Antennæ inserted even with upper border of eyes, antennal axis of head hardly as great as vibrissal and conspicuously less than oral axis. Four sternopleurals; median marginal pair of first segment small, third and fourth segments with marginal row. Hypopygium heavier, more elongate, with broader forceps. Middle and hind tarsi normally longer than corresponding tibiæ; tarsi very

slender, claws very short. Costal spine small, third vein with one bristle, at base, cubitus nearer wing-margin, hind crossvein nearer to small crossvein; wings not quite so shortened.

**Phasiostoma aristalis** new species.

Length of body, 3.5 to 4.5 mm.; of wing, 3 to 4 mm. Six males as follows: Pecos, June 2 (Ckll.) and August 21 (W. P. Ckll.); Beulah, July 15 and August (Ckll.); Sante Fe, July (Ckll., 3865); and Las Vegas Hot Springs, August 19 (H. S. Barber), all in New Mexico.

Testaceous, ashy to silvery pollinose. Face silvery; front, thorax and scutellum cinereous; abdomen silvery on narrow bases of segments, thinly ashy on rest. Legs testaceous to flavotestaceous, tarsi black. Wings clear, tegulae pearly-white. Antennae black. Palpi nearly concolorous with legs. Frontalia pollinose, showing tawny-flavous in oblique view, blackish in middle by direct view.

Holotype, No. 19621 U. S. N. M., Pecos, June 2.

**PHANTASIOMYIA** new genus.

Genotype, *Phantasiomyia gracilis* Townsend new species.

Differs from *Phasiostoma* as follows: Male.—Vertex about one third of head width; face not constricted, fully one half head width below. Eyes thinly hairy; no outer vertical, only one reclinate and one or two proclinate fronto-orbitals, frontals descending about to arista. Two pairs of weak ocellars; microchaetae of parafrontals descending lower than frontals. Frontalia broader than one parafrontal. Facial depression broad, long; the facialia not flattened to parafacial level, ciliate about one third way up. Epistoma only slightly prominent, of the arcuate type but well cut off and but little projected. Proboscis shorter. Antennae much elongated, the second joint short; third joint six or seven times as long as second, heavy, subequilateral, rounded-subtruncate at tip. Arista long, the second joint well elongated but only one fourth or one fifth the length of third, the latter tapered at tip. Head subrectangular in profile, the oral and vibrissal axes equalling the antennal axis. Three sterno-pleurals. No complete marginal row of strong macrochaetae on third segment. Wings rather longer, costal spine completely atrophied, third vein bristled over half way to small crossvein. Cubitus removed from margin, hind crossvein only slightly nearer to cubitus than to small crossvein. Tarsi rather heavier, gently tapering to tips.

*Phantasiomyia gracilis* new species.

Length of body, 6 to 6.5 mm.; of wing, 5 mm. Three males, Beulah, New Mexico, one July, 1902, the others July 15 (Cockerell).

Antennæ, frontalia and palpi rufoflavous, the third antennal joint tinged with fuscous on apical portion and upper edge; arista blackish. Head silvery; parafrontals, mesoscutum and scutellum cinereous; pleuræ silvery; abdomen silvery on narrow bases of segments, rest thickly pollinose with rather more of a brassy tinge than mesoscutum. Femora brown, tibiæ testaceous, tarsi black. Wings clear, tegulæ white.

Holotype, No. 19620 U. S. N. M.

## Family MINTHOIDÆ.

**POLIDEOSOMA** new genus.

Genotype, *Polideosoma rohveri* Townsend new species.

Male. Form narrowed. Frontal one and one half times lower profile of head. Facial profile well receding. Antennal one and one half times vibrissal axis. Clypeus rather broad, slightly wider below than above; carina very faint. Epistoma rather cut off, the edge faintly prominent. Facialia wholly bare, sharp. Vibrissæ exactly on oral margin. Peristomalial short, widely separated, with bristles much weaker than vibrissæ. Proboscis very short and fleshy, part below geniculation about one half length of third antennal joint. Palpi small, a little thickened at tip. Antennæ inserted far above eye-middle, near upper eye-limits; second joint very short; third joint about six times as long as second, rather heavy, dilated and subtruncate apically, the front apical corner produced, the front edge thus concave in profile. Arista about as long as third antennal joint, enlarged on basal half, thence tapering evenly to tip; the basal joints short but both distinct, each as long as broad. Eyes practically bare, rounded, almost as broad as high. Front equilateral, slightly wider than one eye. Parafrontalia with fine short bristly hairs on orbital edges. Three frontals on each side, descending about to end of second antennal joint. Inner verticals long, straight, reclinate, not decussate; outer ones one half as long, divaricate. Four proclinate fronto-orbitals on each side, the front and hind ones weak; two reclinate on each side, hind ones divaricate. Frontalia in front about three fifths as wide as parafrontalia, widening rapidly behind to nearly fill front where the arms enclose ocellar area. Ocellars present, proclinate-divaricate. Parafacialia rather narrow, elongate, with some faint

minute hairs on orbital edge, and seven downwardly-curved bristles forming a row parallel with facialia. Cheeks rather over one half eye-height. Cheek grooves restricted, short. Several stronger bristles on front portion of occipital area of cheeks. Sternopleurals, 0:1:1; postsuturals, 3; preacrostichals, 2; postacrostichals, 1 front one, the middle and hind ones showing as minute hairs. Two lateral scutellars, the posterior one reaching to base of third abdominal segment; a reclinate decussate apical pair, as strong as anterior lateral; two weak erect approximated discals placed far forward. Wings longer than abdomen, not broadened. Costal spine strong, erect; a second shorter one more or less appressed to costa. Third vein bristled to small crossvein. Apical cell with petiole about as long as hind crossvein, petiole formed by third vein. Apical crossvein originating from cubitus at obtuse angle, very faintly sinuate; cubitus without appendage. Hind crossvein straight, slightly nearer to cubitus than to small crossvein, set at an angle of about 45 degrees to the hind margin of wing, not parallel with apical crossvein. Tegulae large, subrounded, front scale hardly one fourth the size of hind scale. Legs short. Hind tibiae subpectinate, with about three long and seven short bristles on outer edge. Metatarsi about twice as long as second tarsal joint, except posterior pair which are one and two thirds times second joint. Claws hardly as long as last tarsal joint. Abdomen elongate-oval, no wider than thorax; tip broadly subtruncate, its edge slightly concave; first segment with one lateral marginal macrochaeta; second with one median discal pair, one median marginal pair, two lateral marginal and one weak lateral discal; third with one median discal pair, one median marginal pair, two lateral marginal and several weak marginal; fourth well covered with strong ones. Hypopygium with rather slender forceps.

***Polideosoma rohweri* new species.**

Length of body, 5 mm.; of wing, 3.75 mm. One male, Florissant, Colorado, June 16, 1907 (S. A. Rohwer).

Black. Head silvery pollinose; antennae and frontalia brown or blackish, with bloom; arista black. Beard white. Palpi obscurely rufous. Thorax shining black, with faint bloom, showing three heavy broad vittae behind in oblique view. Scutellum and abdomen shining polished black, without bloom. Legs black with a brownish tinge. Wings clear. Tegulae watery-whitish.

Holotype, No. 19568 U. S. N. M.

Named in honor of Mr. S. A. Rohwer.

## Family LARVÆVORIDÆ.

**OSTRACOPHYTO** new genus.

Genotype, *Ostracophyto aristalis* Townsend new species.

Differs from *Metaphyto* (genotype, *genalis* Coquillett) as follows: Female front at vertex hardly more than one third head width; frontal, vertical and orbital bristles much stronger, also ocellar bristles; second antennal joint short, first and second arisal joints elongate, arista thickened nearly to tip which is strong and sharp-pointed; palpi shorter and more slender, a little widened at tip; frontal bristles descending as low as base of arista, closely placed. Abdomen with strong median discal and marginal bristles on intermediate segments, anal segment with discal and marginal rows. Apical cell short petiolate, hind crossvein strongly sinuate.

**Ostracophyto aristalis** new species.

Length of body, 8 to 10 mm.; of wing, 7 to 9 mm. Two females, Woodside, California, April 25, 1906; Santa Clara county, California, April, 1902 (Coleman).

Black, rather shining. Face and front silvery pollinose, the parafrontals showing largely blackish through the pollen, which here has a faint brassy tinge. Frontalia dark brown, first two antennal joints slightly rufous, arista soft black. Palpi yellowish, their bases fuscous. Thorax and abdomen thinly and irregularly silvery pollinose; four equal deep black vittæ on thorax; scutellum yellowish on disk. Wings clear, veins dark brown; crossveins slightly clouded, especially small crossvein. Legs wholly black. Tegulæ white.

Holotype, No. 19570 U. S. N. M.

The holotype, which is the Woodside specimen, was labeled by Coquillett "*Metaphyto aristalis* Coq.," but I can not find that the species was ever published.

**UPODEMOCERA** new genus.

Genotype, *Upodemocera robinsoni* Townsend new species.

Differs from *Fabriciclla* as follows: Male.—Front at vertex nearly or quite as wide as one eye. Profile of third antennal joint like that of a shoe, the upper apical corner being greatly prolonged into an angle and the lower edge at the same time bulged strongly. First arisal joint very elongate, second twice as long as first and fully half as long as last joint. Hypopygium massive, much larger. Lobes of

edge of second genital segment set with short spines. Ventral plate three with thick brush of shorter sharp bristle-like spines; those of two and five being long and hairlike as in *Fabriciella*, but more thickly set. Claws nearly or quite twice as long as last tarsal joint.

**Upodemocera robinsoni** new species.

Length of body, 16.5 mm.; of wing, 12.5 mm. One male, Yellowstone Park, July 17, 1907 (W. Robinson).

Head very pale golden pollinose. Facial plate pale honey-yellow. Antennæ blackish or brown, except the reddish articulations. Palpi fulvorufous. Frontalia reddish-brown. Parafrontals shining black on inside edge, vertex and ocellar area same. Thorax black, shining, with only the faintest sign of bloom in oblique light. Scutellum pale testaceous. Abdomen shining blackish, broadly obscure deep rufous on sides of second and third segments. Legs black. Pulvilli same shade as epistoma. Claws about shade of palpi, tips black. Wings nearly clear, pale yellow at base, veins deep yellow. Tegulae pale yellowish, the front scale more whitish.

Holotype, No. 19571 U. S. N. M.

Named in honor of Mr. W. Robinson.

**PALPOTACHINA** new genus.

Genotype, *Palpotachina similis* Townsend new species.

General form and appearance of *Peleteria*; but, though belonging in a distinct group, the genotype approximates more nearly the head characters and coloration type of *Protodejcania hystriosa*, from which genus *Palpotachina* may be distinguished by the following characters: Male only described. Proboscis and palpi practically same, though both may run a little shorter. Checks not so wide, only a little over one half eye height. Epistoma not quite so produced. Frontalia wider, averaging quite one third of frontal width. Third antennal joint moderately broad, about same length as second, straight on front edge, truncate at tip but corners not angular. Frontal and all head macrochaetae a little stronger. Scutellum with two long heavy laterals, a shorter decussate apical pair, a still shorter discal separated pair, these all curved and subappressed; a subapical approximated pair, erect, spinelike but not heavy; also a few short straight ones on disk. Abdomen not broadened, slightly wider than thorax, *Peleteria*-like. Second segment bearing a median marginal strong erect pair of macrochaetae, with two short erect ones between them and slightly nearer margin. Third segment bearing submarginal row



of heavy erect ones, with marginal row of short erect ones immediately behind them. Fourth segment with two transverse discal rows, besides marginal bristles, the whole covering over posterior half of segment. Middle and hind tibiae with much heavier spines. Cubitus far removed from hind margin of wing, sometimes with very short stump and always with wrinkle pronounced.

**Palpotachina similis** new species.

Length of body (flexed), 11 mm.; of wing, 9 mm. One male, head of Rio Piedras Verdes canyon, Sierra Madre of Chihuahua, Mexico, about 7300 ft., August 14, 1899 (Townsend).

Head silvery-white pollinose, frontalia testaceous, first two antennal joints and base of third rufous; parafrontals brassy, a faint tinge of same spreading over parafacials and cheeks. Occiput brassy-gray pollinose, with pale yellow beard. Palpi fulvous. Thorax and legs black; humeri, broad lateral and hind borders of mesoscutum and all of scutellum yellowish-testaceous; the dark parts with silvery bloom, the lighter parts with brassy-gray bloom; tibiae rufous. Abdomen clear rufous-yellow; the postscutellar triangle black; an ill-defined reverse triangle on anal segment black but fading out behind, the hind border of segment broadly rufous. Venter all yellow except broad hind border of anal segment. Hypopygium brown to blackish on exposed surface, the unexposed rufous. Wings evenly lightly smoky. Wing bases and tegulae pale rust-yellow, the hind scale more or less white on disk.

Holotype, No. 19572 U. S. N. M.

Family EXORISTIDÆ.

**CHRYSOMASICERA** new genus.

Genotype, *Chrysomasicera borealis* Townsend new species.

Differs from *Chrysoëxorista* as follows: Form much broader. Discals of abdomen often doubled in female, a second pair near front margin of third segment. Apical scutellar bristles quite long, decussate. Male claws very elongate. Venter and posterior part of abdomen hairy in male. Male vertex not over one fourth head width, that of female a little under one third same. Cheeks less than one third eye height in female, over one third same in male. Cubitus angular rather than rounded. The eyes are thickly pilose in both sexes.

**Chrysomasicera borealis** new species.

Length of body, 9 to 10.25 mm.; of wing, 8 to 9 mm. One male, top of Las Vegas Range, above Beulah, New Mexico, in the Hudsonian zone, June 28

(Cockerell); one female, Las Vegas Hot Springs, New Mexico, August 9 (H. S. Barber).

Differs from color description of *Chrysoëxorista viridis* only as follows: Second antennal joint obscurely rufous, wings with a very faint fuscous tinge. The inner thoracic vittæ are rather more linear. A median fifth vitta nearly as dark as the others, but, unlike the others, fading with incidence of light, as is the case in *Chrysoëx. viridis*. A label by Cockerell on the male reads: "In life brilliant golden shot with green."

Holotype, No. 19613 U. S. N. M., male. Allotype, female.

*Exorista ochracea* Wulp probably belongs to this genus. It is described as having only four thoracic vittæ, the inner pair not extended behind the suture, the antennæ wholly black, eyes thinly pilose, and is very much smaller.

#### PHÆNICIOMYIA new genus.

Genotype, *Phænicomyia arizonica* Townsend new species.

Differs from *Tachinophyto* as follows: Male.—Cheeks and parafacials narrower, front about one third head width. Second antennal joint hardly so elongate, the third joint two and one half or nearly three times second. Two or three sternopleurals, three postsuturals; three strong lateral scutellars, apical decussate pair not erect. All segments with median marginal, last three with median discal, last two with marginal row, all erect. Apical cell closed in border, ending far before wing-tip; cubitus angular, half way between front and hind margin of wing; apical crossvein well bowed in, subparallel with hind margin of wing; hind crossvein nearly half way between cubitus and small crossvein, sinuate, subparallel with apical crossvein; last section of fifth vein more than half as long as preceding section, but not nearly as long as same. Costal spine distinct, third vein bristled nearly to small crossvein. Hypopygium larger. Claws a little longer.

#### *Phænicomyia arizonica* new species.

Length of body, 6.5 mm.; of wing, 4.75 mm. One male, Phœnix, Arizona, March 31 (Cockerell).

Black, with silvery pollen. Head silvery-whitish, frontalia brownish-red, palpi light rufous; antennæ blackish, first two joints brownish. Thorax and scutellum silvery; four thoracic vittæ, the inner pair linear. Abdomen polished black, the bases of segments two and three rather broadly densely silvery-white pollinose, base of anal segment a little less broadly so. Legs black. Wings clear. Tegule white.

Holotype, No. 19616 U. S. N. M.

**ORGANOMYIA** new genus.

Genotype, *Organomyia frontalis* Townsend new species.

Allied to both *Pseudatractocera* and *Macromecigenia*, differing from former as follows: Male.—Front very prominent in profile, the parafacials and front forming a cone with the base of antennæ as the apex. Front at vertex over one and one third times eye width, widening anteriorly. Parafrontals twice as wide anteriorly as posteriorly; with three rows of bristles outside frontals, of which the innermost are stronger and extend half way down parafacials, the others extending not so low but far below frontals. Frontalia of even width before ocellar divergence, being same width as base of antennæ and less than half anterior width of parafrontals. Frontals not very strong, descending to base of third antennal joint. Two reclinate fronto-orbitals. Outer vertical hardly longer than the occipito-orbital fringe. Parafacials very broad and long, quite equilateral, about as broad as anterior part of parafrontals, and nearly or quite as wide as distance between facialia. Cheeks a little under one half eye height. Facial depression very long and deep, broad all way up, only slightly narrowing above; epistoma sufficiently produced to bring oral margin even with facialia crests. Facialia bare, rather sharply crested; vibrissæ but slightly above oral margin. Second antennal joint slightly elongate; third joint very long, equilateral, over five times as long as second; arista curved, thickened nearly to tip, a little over one half as long as third antennal joint, basal joints short. Eyes moderately thickly hairy. Only two or three short discal scutellars, a slender decussate apical pair of same length, and only three laterals. No median macrochætæ on first segment, a median discal pair on second and third, a well-marked discal row on fourth. Apical cell closed in margin. Cubitus a little more removed from hind margin. Apical crossvein at point of origin forming sharp right angle with fourth vein, well bent in. Hind crossvein much nearer to cubitus than to small crossvein. Hind tibiæ weakly pectinate. Claws very long, conspicuously longer than last tarsal joint.

*Organomyia frontalis* new species.

Length of body, 9 mm.; of wing, 7 mm. One male, Organ, at north end of Organ Mts., New Mexico, September 27, 1896 (Townsend).

Blackish. Head silvery pollinose, epistoma and facial crests brownish-fulvous. Frontalia dark brown. Palpi and first two antennal joints rufous.

Thorax silvery; with five blackish vittæ, the three middle ones so approximated as to be almost confluent, the middle one and the two outer ones reaching further back than the other two. Scutellum fulvotestaceous apically, all silvery. Abdomen silvery, the second and third segments with large subrectangular blackish markings that wax and wane according to light incidence; first segment black. Legs blackish. Wings clear. Tegulæ white.

Holotype, No. 19576 U. S. N. M.

### Family RHODOGYNIDÆ.

#### ODONTOCYPTERA new genus.

Genotype, *Odontocyptera nana* Townsend new species.

Differs from *Neocyptera* as follows: Female.—A spinigerous tubercle present on venter of second abdominal segment, formed by inner ends of tergal sclerites. First abdominal segment no longer than second. Basal segment of hypopygium more elongated. Abdomen of equal width behind basal constriction. There is a delicate straw-colored chitinous piercer. The spines of tubercle are directed posteriorly and function in holding host during act of oviposition.

This genus might easily be confused with *Besseria*, but is very distinct, as shown by venation and other characters.

*Odontocyptera nana* new species.

Length of body, 5.5 mm.; of wing, 4.5 mm. One female, Head of Rio Piedras Verdes, about 7,300 feet, Sierra Madre of Chihuahua, Mexico, July 14, 1899 (Townsend).

Differs from *Neocyptera dosiades* Walker in coloring only as follows: First abdominal segment red except broad median truncate triangle above, sides of base and median vitta on venter; leaving sides broadly red behind. Second segment all red except broad median vitta above in continuation of the truncation of triangle, and the spinigerous tubercle of venter. Third segment red except only reversed irregular triangle above which is continuous with black of anal segment and hypopygium.

Holotype, No. 19577 U. S. N. M.

#### CYCLODIONÆA new genus.

Genotype, *Cyclodionæa acuminata* Townsend new species.

Differs from the other genera of the *Leucostoma* group by the following characters: Third and fourth abdominal segments of female successively much narrowed, constricting rapidly but evenly from the narrowing second segment; segments one and two very long, three

shorter, four very short and not glabrous. Female forceps meeting apically in a curve, armed with teeth, the closed forceps forming an almost perfect circle. Proboscis short and fleshy. Epistoma not projecting, vibrissæ a little above oral margin. Two strong verticals in female. Pair of strong reclinate ocellars. Lower border of head quite equalling the frontal length. Frontalia rather broad, occupying one third of frontal width in female. First three abdominal segments with marginal row of bristles, but the median marginal pair is differentiated from the rest in each case by being erect. Fourth segment with only fine hairs. Hairs of abdomen short. Femora thickened. Petiole of apical cell a little shorter than the hind crossvein.

**Cyclodionæa acuminata** new species.

Length of body, 5 to 5.5 mm.; of wing, 3 to 3.5 mm. Two females, Santa Clara county, California (Baker); and Plano, Texas, October (E. S. Tucker).

Black. Head silvery-white pollinose, epistoma yellowish, frontalia dark brown or black, antennæ blackish. Palpi fulvous. Thorax and scutellum shining, thinly silvery-white pollinose. Abdomen shining brown to blackish, not pollinose. Legs black. Wings clear. Tegulæ white.

Holotype, No. 19578 U. S. N. M., California.

**MICROSCIASMA** new genus

Genotype, *Microsciasma minuta* Townsend new species.

Differs from *Sciasma* Coquillett as follows: Vibrissal angles and oral margin on line with lower border of eyes, frontalia of male scarcely at all narrowed, arista shorter. Male abdomen subrounded in outline from above, but slightly longer than broad, arched, macrochaetæ vestigial. Male claws much shorter than last tarsal joint.

**Microsciasma minuta** new species.

Length of body, 2 mm.; of wing, nearly 1.75 mm. One male, Grand Canyon, Arizona, near Colorado River on Hance Trail, about 3,500 ft., July 10, 1892 (Townsend).

Black, antennæ and palpi pale reddish-yellowish, frontalia reddish-brown. Mesoscutum, scutellum and abdomen polished, with slight greenish metallic lustre. Pleuræ polished brown. Femora brownish yellow, tibiæ and tarsi reddish-brown. Wings faintly yellowish-fuscous on costal third, tegulæ deeply yellowish-fuscous. Face, cheeks and parafrontals deep black, occiput shining black.

Holotype, No. 19579 U. S. N. M.

This is the smallest muscoid fly known to me.